

ABSTRACT OF DISCLOSURE

The invention relates to an inner heat insulating and inner sound insulating structure of an HRSG duct wall in which a turbine combustion high temperature and high velocity gas whose temperature is approx. 650°C and velocity is 30 meters per second (m/s) flows, wherein heat insulating members are filled between the inner plate at the gas flow side and the outer plate at the atmospheric side, an intermediate member is disposed at a middle portion between the inner plate and the outer plate, spacing between the inner plate and the intermediate member is retained by stud bolts while spacing between the outer plate and the intermediate member is retained by studbolts, and the studbolt and the outer plate are tightened via a vibration deadening washer. When the vibration deadening washer is disposed at a position in the interior of the heat insulating member, where it is not influenced by the temperature of a gas flowing in the interior of the duct and is not influenced by wearing resulting from the gas, that is, the washer is attached at a position whose temperature becomes 400°C or less, which is half the entire thickness of the heat insulating member, apart from the high temperature side, or at a position therebelow, the durability thereof is high and the heat insulating and sound insulating performance can be maintained for a longer period of time.